

10/567425

Applicant: Chandrika Varadachari
Application No.: Not Yet Known

IN THE CLAIMS

Please amend the claims, as follows:

1. (Original) A process for the preparation of bio-release molybdenum fertilizers which comprises heating molybdenum trioxide, one or more basic compound(s) of metal(s) selected from magnesium, calcium and sodium, and phosphoric acid till a solid polyphosphate is obtained and finally obtaining the dried powder.
2. (Original) A process for the preparation of bio-release molybdenum fertilizers as claimed in claim 1, wherein molybdenum trioxide (MoO_3) and a basic compound such as oxides or carbonates of magnesium, calcium and/or sodium, are heated with phosphoric acid.
3. (Currently Amended) A process for the preparation of bio-release molybdenum fertilizers as claimed in claim 1 or 2, wherein polymerisation is allowed to occur by removal of H_2O between adjacent P-OH groups of phosphates with the formation of P-O-P bonds by heating
4. (Original) A process for the preparation of bio-release molybdenum fertilizers as claimed in claim 3, wherein, the polymerisation is allowed to continue till almost complete, whereupon a dry, friable powdery material is formed.

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5. (Original) A process for the preparation of bio-release molybdenum fertilizers as claimed in claim 4 wherein the dry material obtained is ground to a free flowing, non-hygroscopic product

6. (Currently Amended) A process for the preparation of bio-release molybdenum fertilizers as claimed in claim 1 claims 1 to 5 wherein reducing impurities in any of the raw materials which may interfere with the process is removed by the addition of an oxidant such as MnO₂ (pyrolusite).

7. (Original) A process for the preparation of bio-release molybdenum fertilizers as claimed in claim 1 wherein the product obtained is, a magnesium sodium polymolybdophosphate.

8. (Currently amended) A process for the preparation of bio-release molybdenum fertilizers as claimed in the preceding claims claim 1 wherein the starting materials include molybdenum trioxide (containing up to 66.6% Mo), magnesia (containing up to 60% Mg), sodium carbonate (containing up to 43.4% Na) and phosphoric acid (containing up to 60 % P₂O₅).

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9. (Currently amended) A process as claimed in claim [9] ~~8~~ wherein the weight ratio of Mo :Na :Mg :P used is, 1 :0.96 :2.53 :6.46; the corresponding molar ratio is 1 :4 :10 :20.

10. (Currently amended) A process for the preparation of bio-release molybdenum fertilizers as claimed in claim 1 ~~claims 1 and 8~~ wherein molar ratio of Mo:P may be varied between 1:5 and 1:30 without seriously affecting product properties and is preferably in the molar ratio of 1:20 so as to produce a fertilizer with low Mo levels.

11. (Currently Amended) A process for the preparation of bio-release molybdenum fertilizers as claimed in claim 1 ~~claims 1 and 8~~ wherein the amount of Na is optimally at a molar ratio of 4 with respect to Mo.

12. (Currently Amended) A process for the preparation of bio-release molybdenum fertilizers as claimed in claim 1 ~~claims 1 and 8~~ wherein the amount of Mg is in the ratio Mg: P = 1 : 2 which is sufficient to form the dihydrogen phosphate.

13. (Currently amended) A process for the preparation of bio-release molybdenum fertilizers as claimed in claim 1 ~~claims 1 to 7 and 10~~ wherein the starting materials include molybdenum trioxide (containing up to 66. 6 % Mo), sodium

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carbonate (containing up to 43.4 % Na) and phosphoric acid (containing up to 60 % P₂O₅).

14. (Currently Amended) A process as claimed in claim 1 claims 1 and 13 wherein the molar ratio of Mo : Na: P optimally used is, 1 : 24: 20.

15. (Currently Amended) A process for the preparation of bio-release molybdenum fertilizers as claimed in claim 1 claims 1 to 7 and 10 wherein the starting materials include molybdenum trioxide (containing up to 66.0 % Mo), magnesia (containing up to 60 % Mg), and phosphoric acid (containing up to 60 % P₂O₅).

16. (Currently Amended) A process as claimed in claim 1 claims 1 and 15 wherein the molar ratio of Mo: Mg: P optimally used is, 1 : 12 : 20.

17. (Currently Amended) A process for the preparation of bio-release molybdenum fertilizers as claimed in claim 1 claims 1 to 16 wherein all reactants are mixed together, and heated at a temperature range of 200-350°C till dry.

18. (Original) A process for the preparation of bio-release molybdenum fertilizers as claimed in claim 17 wherein the optimum temperature is 300°C.

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19. (Currently Amended) A process for the preparation of bio-release molybdenum fertilizers as claimed in claim 1 ~~claims 1 to 16 and 18~~ wherein molybdenum trioxide is first heated in a solution of the base, which is selected from oxides and carbonates of sodium, calcium and magnesium and then further heated with phosphoric acid till dry.

20. (Cancelled)